

# Fishes from New Caledonia

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(Contribution from The Australian Museum, Sydney.)

(Figures 1-2.)

Over the past twelve years, The Australian Museum has received many fishes from New Caledonia, presented by Dr. and Madame Rene Catala of the Aquarium at Noumea. Most of these have been identified and a list of the genera and species, in alphabetical order, is given below. First, however, there are two new species to be described and some new records for New Caledonia to be noted.

## Family CHROMIDAE.

Genus CHROMIS Cuvier, 1814.

CHROMIS ROLLANDI, sp. nov.

(Figure 1.)

D. xiii, 10; A. ii, 12; P. 15; V. i, 5; C. 15 main rays. L. lat. with 12 tubes and 5 to 7 pores, obsolete posteriorly. Sc. 23. Tr. 2/1/9. About 13 predorsal scales.

Head (12 mm.) 3. depth (17) 2.1 in standard length (36). Eye (4.5) 2.6 in head. Depth of caudal peduncle (6) subequal to second anal spine.

Profile convex, form ovate, deepest over anal origin, fairly compressed. Mouth naked, reaching below front of eye. Lips normal. Mandibular

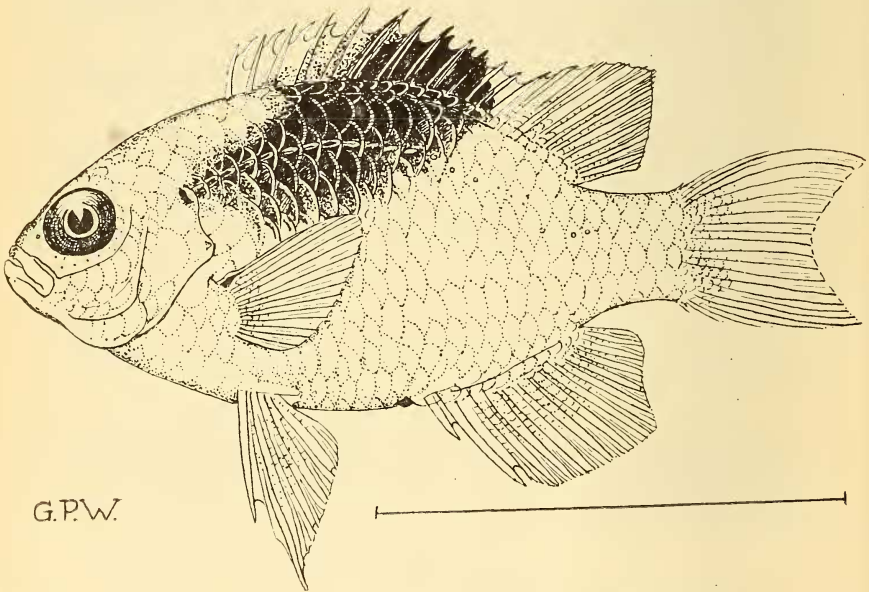


Figure 1.—Rolland's Chromis, *Chromis rollandi*. Holotype, New Caledonia.

ramus not ascending very steeply. Teeth slightly compressed, none horizontal. Snout and preorbital naked, porous. All opercles entire. Infra-orbitals scaly posteriorly. Interorbital scaly. Two rows of cheek-scales. Chin naked. Scales ctenoid, without basal auxiliaries. Two rows of scales above the lateral line which is obsolete posteriorly.

Fifth dorsal spine slightly longer than others. Fin-lobes all moderately pointed. Dorsal and anal fins slightly scaly, apart from basal scales. Second anal spine not elongated, equals postorbital portion of head. Anal base little longer than soft dorsal base. Caudal emarginate, its upper lobe the longer, subequal to head-length.

General colour in preservative, yellow. Eye blue. Fins mostly white. A small bluish spot over opercle. Most of upper parts of sides of body dark brown, which colour-patch is continued over posterior parts of spinous dorsal fin. A minute dark mark at upper origin of pectoral fin. No dark bars on caudal fin. Anal papilla black.

The life-colours according to Dr. R. Catala, were very pale greenish on top of the head and the anterior part of back and spinous dorsal fin. Eye black. Face and breast pale yellowish. Upper parts of sides dark brown. Flanks posteriorly white with pink iridescence according to incidence of light. Ventral fins white with very pale bluish reflections. All other fins transparent. The limits of the colours are not well defined but gradate one into the other.

Described from the unique holotype of the species, a specimen 36 mm. in standard length or  $1\frac{3}{4}$  inches overall. Australian Museum registered No. IB.4449.

*Loc.*—Caught near the intake pipe of the aquarium at Baie des Citrons, Noumea, New Caledonia. Presented by Dr. Rene Catala; his number 1959/53.

Readily distinguished from its congeners by its coloration and, less noticeably, by its fin-counts and other characters combined in the foregoing description.

According to a letter from Dr. Catala, the fish is not very rare in New Caledonia and he has two living in the aquarium. It is found in coral gardens which grow along the shore or around islets. It is difficult to capture because it is very shy. He asked me to dedicate the species, if new, to his friend, Mr. Jean Rolland, who helps him very much, and this I have much pleasure in doing.

#### Family HARPIDAE.

Genus LIENARDELLA Fowler & Bean, 1928.

LIENARDELLA FASCIATA (Gunther).

*Xiphochilus fasciatus* Gunther, Proc. Zool. Soc. London 1867, p. 101, pl. x. Cape York, Queensland. *Id.* Bleeker & Pollen, Poissons Madagasc., 1875, p. 6. And of lists. *Id.* Saville-Kent, Gt. Barrier Reef, 1893, p. 296, pl. xv, fig. 1. *Id.* Anon., N. Qld. Nat. iii, 6, 1935, p. 23. *Id.* Roughley, Gt. Barr. Reef, 1936, p. 273, pl. xlix, fig. 2.

*Lepidaplois mirabilis* Snyder, Proc. U.S. Nat. Mus. xxxv, Oct. 30, 1908, p. 96. No loc. [=Japan or Riu Kiu Islands] *et ibid.*, xlii, 1912, p. 506, pl. lxvi, fig. 1. Okinawa, Japan.

*Lepidaplois (Lienardella) mirabilis* Fowler & Bean, Bull. U.S. Nat. Mus. 100, vii, 1928, p. 202.

*Lienardella fasciata* Myers, Stanford Ichth. Bull. i. 3, 1939, pp. 87 & 88. *Id.* Coates, Gt. Barr. Reef, 1950, coloured frontispiece, fig. 5. *Id.* Fowler, Ic. Notes i. 3, 1957, p. 68. *Id.* Catala, France Australe, March 19, 1959, figure; Nature Study (Osaka Museum, Japan) v, 6, 1959, p. 2, fig.

*Lienardella mirabilis* Fowler, Quart. Journ. Taiwan Mus. ix, 1956, p. 177, fig 7.

The Macaw Fish or Harlequin Tusk Fish is a most colourful species which can now be formally recorded as a member of the New Caledonian ichthyofauna. Although it has appeared on the 3 franc (1959) issue of New Caledonian stamps and been featured in colour on the cover of *Life International* (August 17, 1959), the genus and species has not been recorded in zoological literature from New Caledonia, as far as I know. Dr. R. Catala has presented a specimen from Noumea to the Australian Museum. Registered No. IB.4467. It attains a length of one foot.

Family BODIANIDAE.

Genus CHOERODON Bleeker, 1845.

CHOERODON TRANSVERSALIS Whitley.

*Choerodon transversalis* Whitley, Austr. Zool. xii, 1956, p. 258, fig. 7. Heron Id., Queensland.

A small example of this species from Dr. R. Catala of the Noumea aquarium is a new record for New Caledonia. Aust. Mus. regd. No. IB.4436.

Family BLENNIIDAE.

Genus PESCADORICHTHYS Tomiyama, 1955.

*Pescadorichthys* Tomiyama, Jap. Journ. Ichth. iv, 1955, p. 8, Orthotype, *Salaria namiyei* Jordan & Evermann, Proc. U.S. Nat. Mus. xxv, 1903, p. 362, fig. 25 from Hokoto or Pescadores Islands.

The type-species of this genus has been synonymised by some authors with *Salaria frontalis* Cuv. & Val. Other suggested synonyms are *Petrosirtes atrodorsalis* Gunther, 1877, *Salaria bicolor* Day, 1888, *S. furcatus* Johnstone, 1904 (preocc.), *S. burmanicus* Hora & Mukerji, 1936, *Ecsenius bicolor*, *frontalis* and *namiyei* of recent authors and *Meiacanthus atrodorsalis*.

Dr. R. Catala has sent several specimens from near Noumea, New Caledonia (Austr. Mus. regd. Nos. IB.3835, 3848 & 4508) and a coloured illustration of one in the Noumea aquarium appeared as a so-called "Chinese Fish" in *Life International* magazine, August 17, 1959. Otherwise, *Pescadorichthys frontalis* (Cuv. & Val.) does not appear to have been recorded from New Caledonia.

With Dr. Catala's specimens was one fish which, though superficially similar, was obviously different from *frontalis* and its nominal synonyms and close study of the specimen convinces me that it requires a new name:

MUSGRAVIUS, subgenus nov.

Orthotype, *Pescadorichthys (Musgravius) laudandus*, sp. nov.

A tropical marine blenny rather like *Aspidontus* Quoy & Gaimard, 1835, but having the gill-opening small and higher up on the sides; it is even closer to *Pescadorichthys* but has more numerous fin-rays, is more elongate and has the mouth overhung by the tumid snout, all points in which it disagrees also with *Ecsenius* McCulloch, 1923.

No marked cirrhi, cilia or barbels. Interorbital greater than eye. Anterior margins of jaws little rounded. Lips entire. Teeth compressed, comb-like, movable, less than 70 across each jaw. Small lateral canines. Fold at angle of mouth below eye. Gill-opening restricted to a small lateral opening before and above pectoral origin. Head plus trunk one-third of total length. Cylindrical anteriorly, compressed posteriorly. Lateral line obsolete. No scales. Vent slightly before anal fin. Dorsal fin originating just behind level of eye, its spines and rays totalling less than 40. Dorsal spines elevated, weak; spinous and soft dorsals united imperceptibly into one

fin with almost entire margin (no notch). Dorsal and anal fins free from caudal. Pectorals rounded. Ventrals reduced, jugular, before level of pectorals. Upper and lower caudal lobes produced. All fin-rays simple. Coloration contrasted, very dark anterior and very light posterior half.

The new subgenus is named after my late friend and colleague in museum and field work, Anthony Musgrave.

PESCADORICHTHYS (MUSGRAVIUS) LAUDANDUS, sp. nov.

(Figure 2.)

D. 39; A. ii, 24; P. 13; V. 2?; C. 12 main rays. L. lat. 0.

Head (11 mm.) 5.2, depth of body (7) 8.2 in standard length (58). Snout slightly less than eye (3). Predorsal length 7 mm.; interorbital, 4; width of head, 5; length of pectoral fin, 7.5; of ventral, 3; of caudal, 17; depth of caudal peduncle, 5 mm. General characters as in definition of subgenus.

Anterior profile roundly bulging, overhanging mouth. Top of head not pitted. Eyes lateral; interorbital broad and convex. Few small pores round eye and on interorbital. No crest on cirrhi on head. The mouth is damaged but the teeth appear to be compressed, numerous, in a single comb-like row in each jaw; slenderer, smaller and more numerous on dentary. Hooked lateral canine. Gill-opening very small, above and before pectoral insertion. No scales or lateral line. Vent slit-like; urinogenital papilla shield-shaped with a central knob.

Dorsal fin not notched, elevated anteriorly, evidently with convex entire margin but some of the posterior rays are broken. Fin-rays all simple, none produced. Anal lower than dorsal, its membranes slightly incised; no swellings or knobs on its spines or rays. Pectoral rounded, equal to head without snout. Ventrals reduced, truncate, apparently united.

Colour, after preservation: anterior half dark brown except for the blue eyes and pale yellowish area around mouth; posterior half pale yellow. Upper and lower caudal rays infuscated; other fins mainly similar in colour to adjacent areas of the body. No dark spot around vent.

Described and figured from the unique holotype of the species, a specimen 58 mm. in standard length or 75 mm. (3 inches) overall, apparently female. Australian Museum registered No. IB.4509.

Locality: Barrier reef of Noumea, about ten miles from Baie des Citrons, New Caledonia. Collected by Madame R. Catala and Dr. Yves Merlet and presented by Dr. R. Catala in 1959. His number 78.

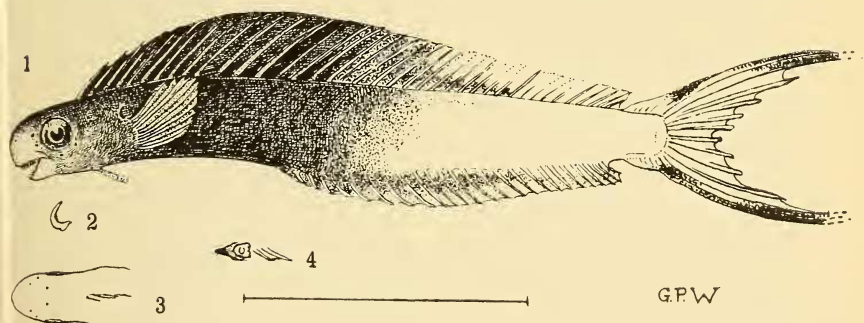


Figure 2.—Blenny, *Pescadorichthys (Musgravius) laudandus* Whitley. No. 1. Lateral view of holotype. 2, a canine tooth. 3, top of head, and 4, anus, urinogenital papilla and two anal spines. All to same scale,  $1\frac{1}{2}$  times natural size. Line represents one inch.

G. P. Whitley del.

NEW CALEDONIAN FISHES.

The following species of fishes have been presented to the Australian Museum by Dr. R. Catala between 1948 and 1959.

- Aeoliscus strigatus* (Gthr.).  
*Amblygobius phalaena* (C.V.).  
*Amphacanthus nebulosus* Q.G.  
*Amphacanthus spinus* (L.).  
*Amphiprion bicinctus* (Rüpp.).  
*Amphiprion ephippium* (Bl.).  
*Amphiprion perideraion* Blkr.  
*Amphiprion sebae* Blkr.  
*Antennarius phymatodes* Blkr.  
*Apogon norfolcensis* Ogilby.  
*Apogon noumeae* Whitley. HOLO-TYPE.  
*Apogon orbicularis* C.V.  
*Archamia leai* Waite.  
*Archamia lineolata* (C.V.).  
*Aspiscis savayensis* (Gthr.).  
*Asterropteryx semipunctatus* Rüpp.  
*Atrosalarias fuscus* (Rüpp.).  
*Aulostomus chinensis* (L.).
- Bathygobius fuscus* (Rüpp.).  
*Belonepterygion fasciolatum* (Og.).  
*Brachirus zebra* (Q.G.).
- Canthidermis rotundatus* (Procé).  
*Canthigaster valentini* (Blkr.).  
*Caprupeneus jeffi* (Og.).  
*Cenropyge bicolor* (Bl.).  
*Cenropyge bispinosus* (Gthr.).  
*Cenropyge tibicen* (C.V.).  
*Cephalopholis miniatus* (Bonn.).  
*Cephalopholis urodelus* (Bl. Schn.).  
*Cestraeus plicatilis* (C.V.) from River Bogy, west coast of New Caledonia.  
*Cetoscarus bicolor* (Rüpp.).  
*Chaetodon citrinellus* C.V.  
*Chaetodon dixsoni* Regan.  
*Chaetodon flavirostris* Gthr.  
*Chaetodon trifascialis* Q.G.  
*Chaetodontoplus conspicillatus* (Waite).  
*Cheilinus chlorurus* (Bl.).  
*Choerodon transversalis* Whitley.  
*Cheilodipterops isostigma* Schultz.  
*Chonophorus guamensis* (C.V.) from River Dogny, near La Foa.  
*Chromis rollandi* Whitley. HOLO-TYPE.  
*Chromileptes altivelis* (C.V.).  
*Cociella crocodilus* (C.V.).  
*Coris angulata* Lac.  
*Coris cingulatum* Lac.  
*Corythoichthys flavofasciatus* (Rüpp.).
- Culius melanosoma* Blkr.  
*Cymolutes lecluse* Q.G.
- Dactyloptena orientalis* (C.V.).  
*Dasson icelii* (Og.).  
*Decapterus russellii* (Rüpp.).  
*Diademichthys lineatus* (Sauv.).  
*Dinematichthys ilucoetoides* Blkr.  
*Diploprion bifasciatum* (C.V.).  
*Dules rupestris* (Lac.), freshwater.
- Eleutheronema tetradactylum* (Shaw).  
*Epinephelus corallicola* C.V.  
*Epinephelus hoevenii* (Bl.).  
*Epinephelus merra* Bl.  
*Eupomacentrus subniger* (De Vis).  
*Eviota abax* (J. & Snyder).
- Fimbriclupea* sp.
- Gergobius taeniura* (Macleay).  
*Gerres oyena* (Bonn.).  
*Glossogobius celebius* (C.V.).  
*Glyphidodontops zonatus* (C.V.).  
*Glyphisodon coelestinus* (C.V.).  
*Glyphisodon polycanthus* Og.  
*Gnatholepis anjerensis* (Blkr.).  
*Graviceps alexanderi* Whitley.  
*Guntheria trimaculata* (Griffith).
- Hemigymnus melapterus* (Bl.).  
*Hemitaurichthys zoster* (C.V.).  
*Heniochus permutatus* Bennett.  
*Hippocampus histrix* Kaup.  
*Hippocampus kuda* Blkr.  
*Holocentrus diadema* (Lac.).  
*Hypseleotris guntheri* (Blkr.) from River Hienghine.
- Inimicus didactylus* (Pallas).  
*Iredaleichthys uniozellatus* (Q.G.).  
*Istiblennius edentulus* (Bl. Schn.).  
*Istiblennius geminatus* (A. & M.).  
*Istigobius ornatus* (Rüpp.).
- Iactoria cornuta* (L.).  
*Leihala polyzona* (Rich.).  
*Lepadichthys frenatus* Waite.  
*Lepidaplois hirsutus* (Lac.).  
*Leptoscarus vaigiensis* (Q.G.).  
*Lethrinus glyphodon* Gthr.  
*Lethrinus nematacanthus* Blkr.  
*Lieuardella fasciata* (Gthr.).  
*Lovania angustata* (Smith & Radcliffe).



- Lovanina compressa* (Smith & Radcl.).  
*Lovanina novemfasciata* (C.V.).  
*Lutjanus fulviflamma* (Bonn.).  
*Lycodontis boschi* (Blkr.).  
*Lycodontis melanospilos* (Blkr.).  
*Lycodontis pseudothyrsoides* (Blkr.).
- Microsicydium elegans* (Steindachner) from Houailou River.  
*Mugil catalanum* Whitley. HOLOTYPE.  
*Myrichthys maculosus* (Cuv.).
- Naso unicornis* (Bonn.).  
*Neoniphon sammara* (Bonn.).  
*Neotrygon kuhlii* (M. & H.).
- Ostracion tuberculatus* L.  
*Ovoides hispidus* (L.).  
*Ovoides inplutus* (Jenyns).  
*Oxyleotris heterodon* (Weber) from River Hienghene.  
*Oxymonacanthus longirostris* (Bl. Schn.).
- Paracirrhites arcatus* (C.V.).  
*Paradules marginatus* (C.V.) from River Tieme, east coast of New Caledonia, and La Foa, west coast, very abundant in all rivers.  
*Paragobiodon echinocephalus* (Rüpp.).  
*Paramonacanthus curtiorhynchus* (Blkr.).  
*Parapercis cylindrica* (Bl.).  
*Parapercis hexophthalmus* (C.V.).  
*Parapomacentrus bankieri* (Rich.).  
*Parexocoetus brachypterus* (Rich.).  
*Pegasus draconis* L.  
*Pelochromis marginatus* (Rüpp.).  
*Pervagor melanocephalus* (Blkr.).  
*Pescadorichthys frontalis* (C.V.).  
*Pescadorichthys (Musgravius) laudandus* Whitley. HOLOTYPE.  
*Petraites roseus* (Gthr.).  
*Petraites sellularius* Whitley.  
*Platophrys mancus* (Brouss.).  
*Plectorhynchus pictus* (Thunb.).  
*Plectorhynchus roughleyi* Whitley.  
*Plectropomus maculatus* (Bl.).  
*Pleuranacanthus scleratus* (Gmelin).  
*Potosus anguillarum* (Bl.).
- Pomacanthus imperator* (Bl.).  
*Pomacentrus pavo* Lac.  
*Pranesus ogilbyi* Whitley.  
*Pseudochromis novaehollandiae* Steind.  
*Pseudopomacentrus sufflavus* (Whitley).  
*Pseudupeneus filamentosus* (Macl.).  
*Pterois volitans* (L.).  
*Pterophrynoides histrio* (L.).
- Rhabdophorus bennetti* (C.V.).  
*Rhabdophorus trifasciatus* (Park).  
*Rhynchostracion* sp. juv.
- Salarias fasciatus* (Bl.).  
*Saurida undosquamis* (Rich.).  
*Scolopsis bilineatus* (Bl.).  
*Scolopsis cancellatus* C.V.  
*Scolopsis trilineatus* Kner.  
*Sebastapistes bynoensis* (Rich.).  
*Selar mate* C. & V.  
*Sicyopterus sarasini* Weber & Bft., from Houailou River.  
*Solenichthys cyanopterus* (Blkr.).  
*Sphyrænella flavicauda* (Rüpp.).  
*Stethojulis axillaris* (Q.G.).  
*Stethojulis strigiventer* (Bennett).  
*Synchiropus splendidus* (Herr).
- Tetrachaetodon plebeius* (C.V.).  
*Tetradrachnum aruanum* (L.).  
*Tetradrachnum melanurus* (Blkr.).  
*Teuthis bleekeri* (Gthr.).  
*Teuthis fuliginosus* (Less.).  
*Teuthis triostegus* (L.).  
*Thalassoma aneitense* (Gthr.).  
*Thalassoma jansenii* (Blkr.).  
*Thalassoma lunare* (L.).  
*Thalassoma melanochir* (Blkr.).  
*Thalassoma stuckiae* Whitley.  
*Trachinotus blochii* (Lac.).
- Upeneus barberinus* (Lac.).
- Vauclusella rufopileum* (Waite).  
*Yongeichthys criniger* (C.V.).
- Zenarchopterus dispar* (C.V.), from River Hienghene.  
*Zoramia leptacantha* (Blkr.).
- And some unidentified species.